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## ABSTRACT

This final report summarizes the findings of the National League of Cities and U.S. Conference of Mayors concerning CETA funded programs. It also examines three case studies in Chicago; Erie, Pennsylvania; and the Virginia Peninsula. The report discusses the need for cooperation between CETA and the vocational education system. Characteristics of good skill training are outlined as well as difficulties in developing CETA programs. Ways in which Title II of the Educational Act of 1976 aid CETA program development are examined. In the Chicago case study, funding of CETA programs is explained in great detail. A flow chart illustrates Chicago's Title I CETA program, including employment services and opportunities in 1977. Much discussion is given here to classroom training. Mention is made of state funding's involvement and how Chicago's program is coordinated. The Erie and Virginia Peninsula studies cover in less detail the same areas as the Chicago study. Flow charts of Erie's Office of Manpower Services and the route taken by a prospective CETA client are included. The Virginia Peninsula study contains flow charts of the peninsula's office of manpower programs organization and the manpower service delivery system. Appended are Chicago's Acceptable Occupations list and Erie's skill needs survey of manufacturing. (CT)

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CASE STUDIES AND FINAL REPORT 1977

THE IMPACT OF CETA  
ON INSTITUTIONAL  
VOCATIONAL EDUCATION

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
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## INTRODUCTION

The role of state and local governments in providing training to the disadvantaged, unemployed, and underemployed was established under the Comprehensive Employment and Training Act of 1973 (CETA). Prior to CETA, state vocational education systems and community based organizations provided skill training to the adult disadvantaged population using funds from the Manpower Development and Training Act.

Under contract with the National Advisory Council on Vocational Education, the National League of Cities and U. S. Conference of Mayors has followed the development of CETA's impact on the vocational education system. Surveys were forwarded to 100 local prime sponsors to question them on their vocational education activities. Results were published in The Impact of CETA on Institutional Vocational Education (December 1974). A subsequent update of that report was published in July 1976. The following pages represent a final report, documented by case studies of Chicago, Illinois; Erie, Pennsylvania; and the Virginia Peninsula Manpower Consortium.

Although the three case study prime sponsors vary in overall population size as well as their level of CETA funding, they do have certain characteristics in common. Those characteristics are the basis for their selection as case study sites. They are:

- (1) Large sums of their Title I funds are allocated to classroom training activities;
- (2) Vocational education and/or corresponding offices within the state department of vocational education are integral program agents; and
- (3) Relationships between vocational educators and CETA prime sponsors are good and have led to greater interaction since CETA's initial developmental stage.

What follows on the coming pages is a final report summarizing the findings of our investigation into CETA funded classroom training, culminating with a glimpse of classroom training activities in three jurisdictions. It is our hope that the reader will be provided with an overview of how three CETA prime sponsors have responded to their own local situations.

## FINAL REPORT

### THE IMPACT OF CETA ON INSTITUTIONAL VOCATIONAL EDUCATION

#### CETA/VOCATIONAL EDUCATION COOPERATION

The National League of Cities and U. S. Conference of Mayors has, for the past few years, kept a close investigative eye on CETA funded classroom training. Our purpose in entering into our initial contractual agreement with the National Advisory Council on Vocational Education, was simply to determine the impact of the then new CETA legislation on the institutional vocational education system. That role brought about an awareness of the difficulties involved in coordinating the activities of two very different political systems. It also, however, brought about an awareness of the vast potential resources which would be made available to training the unskilled population of our society if those difficulties could be overcome.

With the emergence of CETA, state and local governments were put in the business of providing skill training to those who are disadvantaged, unemployed, or underemployed. Some saw that new initiative as duplicative; others saw it as a parallel role to that of the state education system. Many educators were outraged at the creation of a competitive education system. Supporters of the CETA concept, however,

argued that the education system had failed in meeting the needs of the nation's disadvantaged population. The vast majority of that population resides in our nation's urban areas. Far too many disadvantaged young adults reach the age of 25 without ever having had a job. Skill training is a must in order for them to enter the mainstream of society. The vocational education system has traditionally been more responsive to the needs of rural population groups. Through our involvement with CETA programs, we have determined that in order for skill training to be responsive to the disadvantaged population, the following characteristics must be developed into any programmatic scheme:

- 1) Training must be short term and direct to provide immediate skills for placement in a job;
- 2) Programs must be designed in a flexible, open entry-open exit system so that clients needing skill training can enter and exit at any time rather than having to wait for a new semester to begin;
- 3) Instructor selection should, in many cases, be based on knowledge of skills to be taught and ability to work with disadvantaged clients rather than on their own level of education or their ability to qualify for teacher certification;

- 4) A variety of supportive services must be supplied to enrollees attending training programs. The most needed supportive service is the provision of stipends or allowances. Without monetary support while in training, most CETA eligible enrollees could not participate. Other needed supportive services often include medical care, child care, and legal services - all problems that often plague lower income populations;
- 5) A quick and effective job placement program must be the culmination of effective skill training.

Congress responded to the above needs by enacting the Comprehensive Employment and Training Act of 1973. Prior to CETA, state vocational education systems and community based organizations provided skill training to the adult, disadvantaged population using funds from the Manpower Development and Training Act (MDTA). Local elected officials were excluded, under the system from the decision-making process. Elected officials argued that because they are elected by the people and are accountable to the people, they are better suited to determining local needs than the traditional service delivers under MDTA. Still when CETA was enacted, prime sponsors could not entirely circumvent existing institutions for several reasons.

First, inexperienced prime sponsors had to recognize and call on the past experience of the education system.

Secondly, the facilities and equipment necessary for training are already in existence in vocational education institutions and could, therefore, be used immediately. Finally, a relationship between prime sponsors and state vocational education systems was mandated by Section 112 of the CETA law which sets aside five percent of CETA Title I funds for vocational education activities. Those funds are channelled through the Governor's offices and the state departments of vocational education in each of the states. Prime sponsors are required to negotiate non-financial agreements with their respective state departments of vocational education for the provision of vocational education in each prime sponsor's jurisdiction.

After our first year of investigating CETA's impact on the vocational education system, we concluded (The Impact of CETA on Institutional Vocational Education) that very little had changed - the MDTA system was being maintained and state institutions were generally being funded at previous levels. Many prime sponsors complained that the state vocational education agencies were inflexible in negotiating for the five percent funds. They also complained of the lack of communication between the various levels of government. Few genuine cooperative ventures between prime sponsors and state departments of vocational education seemed to be easing the transition from MDTA to CETA.

We wondered whether the emerging patterns were due to the relative newness of the CETA experience. It would seem to the observer that vocational educators would do whatever possible to entice prime sponsors into increasing expenditures in their system but this had not happened. We continued to investigate and published an updated version of The Impact of CETA on Institutional Vocational Education in July 1976. That second study revealed that relationships between vocational educators and CETA prime sponsors had become more effective, but that improved relationships had not resulted in increased funding of vocational education institutions.

In conversations with prime sponsors, some interesting patterns emerged. It was interesting and surprising that many prime sponsors indicated that they have fine relationships and good cooperation with their respective vocational education systems. Classroom training is often a significant component in their CETA plans. Yet when asked where classroom training takes place, the response is somewhat deceiving. Generally, prime sponsors spend their five percent money at vocational education institutions and then often go elsewhere for other training activities. Community based organizations and private schools are strong competitors and often less expensive than traditional institutions. Some prime sponsors indicate that the lack of flexibility and philosophical differences are the biggest problem. Others blame higher institutional training costs or poor success

rates. Still others point to political realities. Community based organizations have played strong roles in some jurisdictions. It would be politically unfeasible to discontinue their past role as deliverers of a full range of services, including classroom training.

It is interesting to note, however, that in situations where prime sponsors point to good cooperation with their vocational education communities, there is one overwhelming reason - personal relationships. Where good relationships exist, cooperation is fostered. Yet it must be emphasized that cooperation and coordination are not at all the same. When two different political systems are asked to coordinate their activities, the pressures placed upon each of them to maintain their own autonomy are generally overwhelming. The situation, however, is not entirely hopeless. Certain hopeful signs have emerged in the past several years.

One of those signs is the response to the survey NLC and USCM sent to CETA prime sponsors in April, 1976. Over 50 percent of the respondents indicated improved working relationships with institutions that provide vocational education in their respective communities. Also, representatives of the vocational education community, in the overwhelming majority of prime sponsor jurisdictions, are members of local manpower advisory councils. A very helpful sign is the recent passage of the Education Amendments of 1976. Title II (Vocational Education) of the legislation contains language

suggesting coordination between vocational education and CETA. The following aspects of the new law create possible linkages to the CETA system:

- 1) Each state must write a five year as well as a one year program plan and accountability report. The State Manpower Services Council, an organ of CETA must be actively involve in the writing of the plans. Also, if the State Board rejects the recommendations of the State Manpower Services Council, it must include, in the state plan, the reasons for doing so. If after the publication of those reasons, the State Manpower Services Council is dissatisfied with the Board's decision, it may appeal to the U.S. Commissioner of Education and schedule a hearing to resolve the dispute.
- 2) A provision of the new law mandates that a representative of the National Advisory Council on Vocational Education serve as a member of the National Commission on Manpower Policy. Also, a representative of each state advisory councils on vocational education will serve on each State Manpower Services Council.
- 3) Each state must assure the U.S. Commissioner of Education that local recipients of funds consult with representatives of education and

other training programs in the area to be served. Also, they must describe how the activities proposed in the local application relate to local CETA programs. The annual program plan and accountability report must elaborate on the results of the coordination of vocational education programs with manpower training programs.

- 4) The new law calls for the creation of a National Occupational Information Coordinating Committee. Membership on the committee will be composed of the U.S. Commissioner of Education, the Administrator of the National Center for Educational Statistics, the Commissioner of Labor Statistics, and the Assistant Secretary of Labor for Employment and Training. The Committee is to develop and implement an occupational information system to meet the data needs of both vocational education and employment and training programs at the national, state and local levels.

Congress is currently considering reenactment of CETA. Coordination with vocational education is certain to be an issue. Prime sponsors are asking that certain clarifications concerning the five percent funds be written into the re-

enacted law. In particular, prime sponsors want to see the law modified to clearly designate the final recipient of the five percent funds (Section 112 of CETA). They have indicated that under the current language of the law, the intended use of the funds has not been clearly spelled out. For example, many prime sponsors want to use some of the five percent funds to pay allowances to classroom training enrollees. Some State Boards of Vocational Education agreed while others refused to allow that option to prime sponsors even though the Department of Labor ruled that allowances were an acceptable use of the five percent funds.

Another change in the CETA law which would make coordination with vocational education easier to achieve would be to extend CETA's planning and funding cycle. Currently, CETA operates on a one year basis, while vocational educators are required to plan for a five year period of time. Cooperative planning could be enhanced if prime sponsors had their funding allocations for more than one year at a time.

During its contractual relationship with the National Advisory Council on Vocational Education, the National League of Cities and U.S. Conference of Mayors has included vocational education as an agenda item at its conferences. Panel discussions were held at national meetings of CETA Administrators for the purpose of promoting the potential of

a CETA/Vocational Education partnership that would further the cause of skill training for the disadvantaged. The U.S. Conference of Mayors has, at its last two annual conferences passed resolutions calling for enactment of a special urban vocational education program to be coordinated with activities funded through CETA. The U.S. Conference of Mayors urged Congress to "reauthorize all educational programs at the maximum funding....."

Information dissemination to CETA Administrators has been a major vehicle used by the National League of Cities and U.S. Conference of Mayors to further the awareness of the CETA community to vocational education developments. Information concerning legislation, upcoming meetings, and other related miscellaneous items have been circulated to CETA coordinators. At the same time, prime sponsors have been asked to relate to us problems as well as examples of good coordination in their local jurisdictions.

Case studies of Chicago, Illinois; Erie, Pennsylvania; and the Peninsula Consortium in Virginia (Newport News, Hampton, Williamsburg, James City/County, York County, Poquoson) have been written. All of these prime sponsors have invested large sums of CETA funds in classroom training activities. All of them use institutions within the state vocational education system and all of them have developed good relationships with local representatives of the vocational education system. Our activities in the field of vocational

education have led us to the conclusion that the key to a successful working relationship seems to be friendly, unsuspicious communication. Opportunities for interchange between the two systems should be increased to include membership in state and local councils. Prime sponsors should be consulted and provided with the opportunity to comment on vocational education plans. (Vocational education is currently represented on most manpower advisory councils and may therefore use that channel for commenting on CETA plans.).

A truce must be called. Common goals must be identified, flexibility must become automatic, and recognition of what each system has to offer their mutual clientele must be realized. Joint funding of skill training would greatly increase available resources. Skill training is the goal of each system's training programs and coordinated effort could help ease the overwhelming unemployment plaguing the nation today. Hopefully, each system will evaluate its own weaknesses from within and take the necessary measure to correct those weaknesses.

## Chicago, Illinois

Chicago, with over three million residents is the Nation's second largest city. The population of the Chicago metropolitan area represents practically two thirds of the State of Illinois and is composed of a widely diversified ethnic makeup. Each wave of immigration to the United States brought an influx of new residents to Chicago.

Chicago's economy is based on four major components. They are manufacturing, wholesale and retail trade, finance, and the provision of services. Trade, particularly in agricultural products, such as grain and livestock, has been a fundamental ingredient in the economy of the city. Manufacturing is now, however, the dominant economic factor and the largest supplier of jobs. The dominant manufacturing enterprises are in the field of metal and machinery--industries that generally provide good wages for their labor supply.

In the past, Chicago's economy was rooted in its wholesale and retail trade. This is no longer the case. Two of the largest meat packing companies have relocated outside of Chicago and its once famous stockyards have diminished in size. Wholesale and retail trade, although significant economic components have been overshadowed by manufacturing.

Finance is also one of the four major components of Chicago's economy. The Chicago Board of Trade is the nation's leader for setting grain and livestock prices. The banking

industry is also a prosperous one in Chicago.

Chicago is the seat of Cook County and some of the governmental functions of the city are shared with the county. The city has a mayor-council form of government. The mayor is responsible for the administration of the city's fourteen departments and for the preparation of the budget. Each of the 50 aldermen (councilmen) is elected from one of the 50 wards of the city.

Chicago's system of public education is governed by the Chicago Board of Education. Members of the eleven member board are appointed by the mayor with the "advise and consent" of the city council. To combat the high dropout rate in secondary schools, the board of education established nine vocational high schools and a trade school.

The City of Chicago is a prime sponsor under the Comprehensive Employment and Training Act of 1973. Chicago was selected for this case study because a large portion of its CETA Title I funds are spent in providing classroom training to CETA clients. Even more significant, Chicago was selected because of its flourishing relationship with the Division of Adult Vocational and Technical Education of the Illinois Office of Education. The following section will explore classroom training as it takes place under CETA in the City of Chicago.

The Director of the Mayor's Office of Manpower (MOM) organized the city's CETA office into four major operating

units. They are: 1) Program Development; 2) Program Review and Audit; 3) Manpower Information Unit; and 4) A miscellaneous branch which is responsible for contracts, fiscal matters, and public information. The program development unit is also subdivided into three sub-units. They are planning, evaluation, and research. The planning section of Program Development focuses on which Title I programs to fund.

Two-thirds of Chicago's Title I allocation (\$29.9 million in FY 1977) goes directly to clients in the form of wages or stipends. The balance goes into direct training costs and administration.

Four major agencies operate Chicago's system of CETA services. They are: Model Cities-Chicago Committee on Urban Opportunity (Model Cities-CCUO), the Illinois State Employment Service (ISES), the Chicago Alliance of Business Manpower Services (CABMS), and the Illinois Division of Adult Vocational and Technical Education.

The Chicago Manpower Advisory Council must approve CETA program funding levels. Membership on the Council includes representatives of education, labor, and industry. The Assistant Director of the Manpower Training Section of the Division of Adult Vocational and Technical Education serves as a full voting member of the Manpower Advisory Council, and is the Council's link to the state vocational education system.

Skill training in approximately 75 occupations is offered

(2,150 classroom training slots) through a \$2.2 million contract with the Illinois Division of Adult Vocational and Technical Education (DAVTE). An additional 880 training opportunities are offered with the Governor's \$1.1 million five percent vocational education allocation. In addition to classroom training, Title I funds are also spent to create 2,000 work experience slots. That program is administered by CCUO, the local Model Cities Agency. Also, 1,500 on-the-job training slots are administered by the Chicago Alliance of Business Manpower Services.

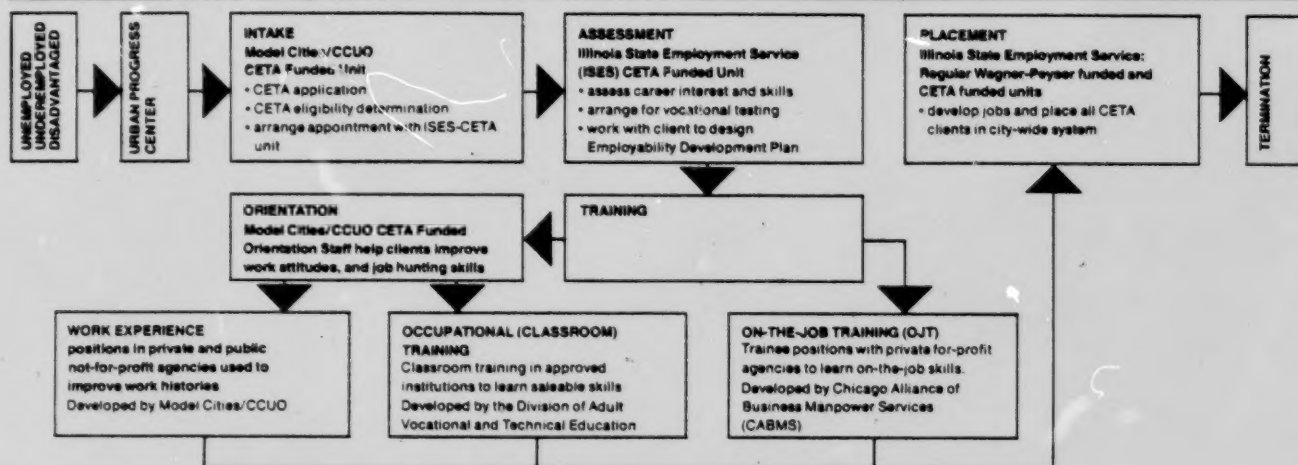
Training stipends to clients are paid out of a \$9 million contract with the Illinois State Employment Service.

The charts on pages 20 and 21 illustrate Chicago's Title I CETA program. The first illustrates the range of services available to CETA clients as well as the agencies which provide each particular service. That chart diagrams the route or possible routes of a CETA client from the initial outreach stage through his or her termination from the CETA program. The second chart represents a breakdown of the number of training slots in each particular type of training program (classroom training, work experience, and OJT) activity as well as a summary of the distribution of Title I funds between the various participating agencies.

# Removing Employment Barriers

## EMPLOYMENT SERVICES

### THROUGH CITY-WIDE SYSTEM



## CETA EMPLOYMENT OPPORTUNITIES IN FY 77

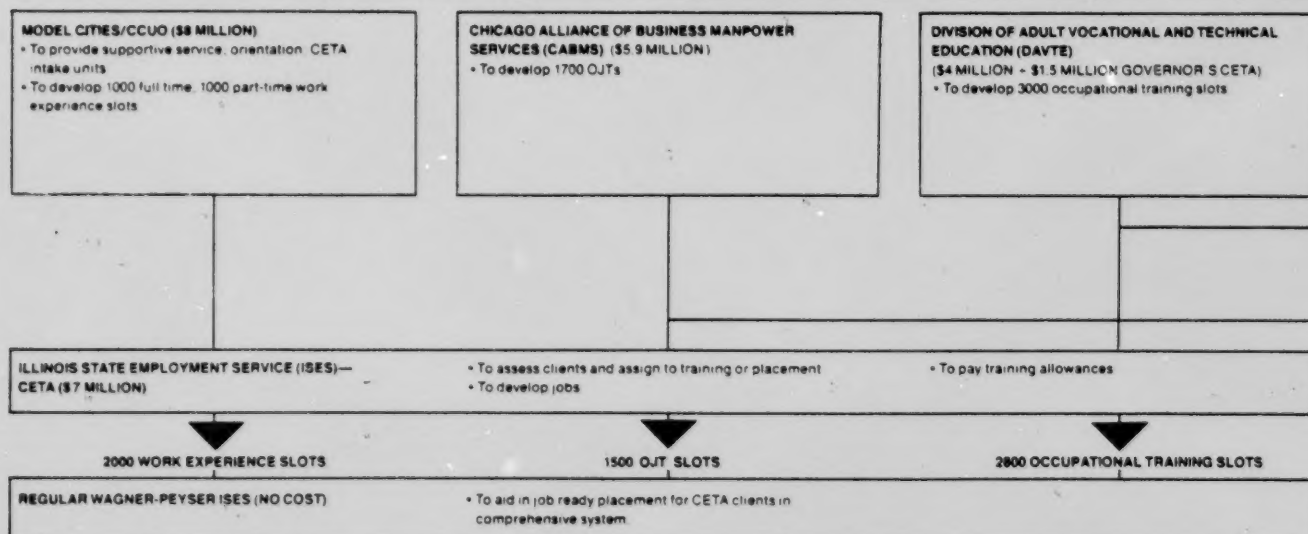
### SUMMARY—DISTRIBUTION OF SLOTS (12,100)

#### COMPREHENSIVE CITY-WIDE SYSTEM

##### SLOTS

|                            |                    |
|----------------------------|--------------------|
| Work Experience            | 2000               |
| Occupational Training      | 2600               |
| On-The-Job Training        | 1500               |
| Job Creation and Placement | Ongoing Activities |
| <b>Total</b>               | <b>6100</b>        |

### SUMMARY—DISTRIBUTION OF FUNDS



## ALTERNATIVE—THROUGH COMMUNITY-BASED + OTHER AGENCIES

### MULTIPLE EMPLOYMENT SERVICE AGENCIES

#### MULTI-SERVICE AGENCIES (MSA)

Community-based agencies offering comprehensive employment services: intake, assessment, training, placement.  
 Examples: UMCA, Northwest Employment Development (NED), The Woodlawn Organization (TWO).

#### OPERATION SER/JOBS FOR PROGRESS

A community-based organization which offers the full range of employment services to its target group.

#### DIRECT CONTRACT AGENCIES

Agencies which develop employment services for specific groups they serve: intake, assessment, training, orientation, and/or placement.  
 Examples: Mayor's Office for Senior Citizens (MOSC), Chicago Board of Education, Archdiocesan School Board.

### JOB CREATION AGENCIES

#### PLACEMENT & RETENTION AGENCIES (PAR)

Perform job placement activities for their target populations. Agencies reimbursed proportionate to amount of time client is retained by employer.  
 Examples: Spanish Coalition for Jobs, Tri-Faith Employment, and Korean American Service.

#### DEPARTMENT OF PERSONNEL, CITY OF CHICAGO

Develops jobs in non-profit agencies; one-half of all jobs end in unsubsidized employment for CETA clients.

#### PLACEMENT PROJECT AGENCIES

Provide direct placement activities for the job ready.  
 Examples: Jewish Vocational Service, Urban League, United Auto Workers.

### COMMUNITY-BASED + OTHER ALTERNATIVES

#### SLOTS

|                            |             |
|----------------------------|-------------|
| Work Experience            | 2900        |
| Occupational Training      | 400         |
| On-The-Job Training        | 200         |
| Job Creation and Placement | 2500        |
| <b>Total</b>               | <b>6000</b> |

#### SLOTS

1200

1700

400

200

#### TRAINING ACTIVITIES

Transitional Work Experience (\$8½ Million in FY 76 Funds)  
 Department of Personnel

Part-Time Work Experience (\$2½ Million)  
 Mayor's Office for Senior Citizens, Archdiocesan School Board  
 Chicago Board of Education

Occupational Training  
 Multi-Service Agencies (MSA),  
 Operation SER/JOBS FOR PROGRESS

On-The-Job Training (OJT)  
 MSA's and SER

#### SLOTS

600

200

1100

600

#### PLACEMENT ACTIVITIES

MSA's (\$600,000)  
 SER (\$500,000)  
 Placement Project Agencies (\$525,000)  
 Placement and Retention Agencies (\$300,000)

Chicago has developed an analytical tool called the Acceptable Occupations List (AOL) for planning for the vocational skills most in demand locally. The AOL is used to identify local manpower needs. The AOL uses 1970 national and local census data, as well as future projections based on data from the University of Illinois Center for Advanced Computation. A listing of nine occupational profile elements were identified. They are as follows:

#### OCCUPATIONAL PROFILE ELEMENTS

Median Income of  
Occupation

Income is the pivotal indicator of worthwhileness. The higher an occupation's income the more likely that the CETA client will realize significant benefits over his previous employment prospects.

Median Education of  
Occupation

Education represents the only measure of "realisticness." The higher the educational requirements of an occupation, the less likely that the CETA client will be able to gain admittance.

Percent in Occupation  
Below Poverty Line

Like income, this measure is an indicator of worthwhileness. The greater the percentage in poverty, the less likely that CETA client will realize benefits indicated by median income.

Occupational Employment  
in 1970  
Occupational Employment  
in 1980

These two characteristics are primary indicators of stability. The larger the occupation in employment terms, the more

likely that the CETA client can find and continue gainful employment in the specific field of training.

Occupation Employment  
Growth Rate 1976-1980

This measure serves the dual purpose of indicating stability and worthwhileness. In the latter, it is hypothesized that a higher growth rate implies greater opportunities for promotion--thus improving the occupation's worthwhileness.

Occupation Employment  
Total Demand 1975-1980

This profile characteristic specifically addresses the issue of skill shortage, client placement, achievability of benefits, and stability.

Replacement Occupation  
Employment Demand 1975-1980

Separating out the components of total demand gives the profile the added dimension of being sensitive to equitability concerns (since CETA placements will, on the whole, result in income redistribution) and the two separate forecasting components of total demand. (Replacements are a function of age distribution; expansions are a function of industry growth).

The selection of occupations for inclusion on the AOL was done on a step by step basis. The first step was the automatic elimination of occupations which pay less than \$6,000 a year or occupations requiring over 13.2 years of education. After the immediate elimination process was completed, 188 occupations remained. Those occupations were coded and ranked by the nine data elements. Within each data type, an occupation received

a rank relative to the median income of all other occupations. Finally, each of the nine data elements are subjectively weighed according to their relative importance to an occupation's acceptability. The system of preparing the AOL is complicated, but the AOL serves as a useful planning tool in selecting types of occupational training and as a check-point for existing programs. (See appendix for AOL list)

## Classroom Training

The Mayor's Office of Manpower (MOM) contracts with the Division of Adult Vocational and Technical Education (DAVTE) of the Illinois Office of Education to provide over 2,000 classroom training opportunities to unemployed, underemployed, and economically disadvantaged residents of the City of Chicago through their Title I CETA grant (\$2.2 million contract).

Prior to CETA, classroom training, authorized by the Manpower Development and Training Act (MDTA) was also conducted by DAVTE. While the Congress was still deliberating the final stages of the CETA legislation, Mayor Richard Daley took advance step to organize the Mayor's Office of Manpower for the city. The appointed director of that office began negotiating with DAVTE for what was later to become the CETA Title I classroom training component of the City's CETA program. By the time CETA was actually ready to become operational, the Director of MOM had his Title I program organized to the extent that the contracts had been negotiated and simply had to be signed.

The following specific goals were established by DAVTE in conjunction with MOM:

- (1) DAVTE will contract for training opportunities on behalf of MOM;
- (2) DAVTE will administer MOM's classroom training funds;

- (3) DAVTE will monitor, audit, and coordinate all classroom training on MOM's behalf;
- (4) DAVTE will solicit and utilize expert information on training and employment opportunities; and
- (5) DAVTE will keep MOM informed of the number and type of training opportunities developed, the success of training, and training funds obligations and expenditures.\*

As the reader can see, the scope of the contract with DAVTE is quite comprehensive. The comprehensive nature of the contract is a direct result of a mutually benevolent relationship that exists between the prime sponsor and DAVTE.

Classroom training, as other types of training programs, must serve significant segments of the local population. Those segments as identified by the Chicago Manpower Planning Council are:

|                  |              |
|------------------|--------------|
| Black            | - 64 percent |
| Spanish American | - 15 percent |
| Youth            | - 45 percent |
| Older Citizens   | - 15 percent |

All enrollees in CETA classroom training programs (funded out of Title I or the five percent funds) are eligible for the full range of supportive services offered by the prime sponsor. Available ancillary services are allowances, child care, transportation, supportive service counseling, and aid-to-first pay.

\*State Board of Education, Illinois Office of Education, Department of Adult, Vocational, and Technical Education, Response to Request for Proposal (Chicago, Illinois, September 24, 1976, p. 2)

Eligible individuals interested in participating in a CETA training programs enter through one of the twelve Urban Progress Centers or through a Multi-Service Agency (MSA). After an assessment process, individuals are assigned to training suitable to his or her needs (with no regard to whether the source of training funds is five percent monies or basic Title I monies).

All enrollees must meet CETA eligibility requirements and minimum acceptance standards as established by the local education agencies (LEA's). If a potential CETA enrollee is referred to a LEA for classroom training, that LEA may exercise the right of rejection, if it feels that the enrollee could not successfully meet the necessary requirements which would lead to completion of the training program and then placement into a job.

When a contract with a training institution is being considered, the prime sponsor and DAVTE staff meet to discuss the proposal. Proposals for training programs often come directly to the prime sponsor's office from institutions and are then transferred to DAVTE. The Division of Adult Vocational and Technical Education is currently organizing committees for electronics, industrial, and clerical occupational clusters. Membership on these committees include local education agencies and industry.

The agreeable relationship between MOM and DAVTE is a result of both early planning and communication and MOM's

past satisfaction with DAVTE's performance under MDTA.

CETA classroom training is done at a variety of settings including the skill center, community based organizations, private schools, and community colleges. Most training institutions are approved by the Illinois Office of Education. The Illinois Office of Education, however, recently ruled that it will no longer accept applications for approval from non-profit training institutions. DAVTE will, therefore, develop its own approval guidelines. DAVTE generally decides where a training program should take place, assists in program development and then goes to the prime sponsor for approval of training objectives, sites, and costs. The prime sponsor is always involved in the initial negotiations with schools. On occasion, the prime sponsor makes the first move in selecting a type of training and even a desired training location. For example, in FY 1977 the prime sponsor told DAVTE that they wanted an allied health program at a local community college on an individual referral basis. A community college was the preferred site because it is less expensive (community college can be less expensive because of their tax base and because they receive additional state funding for each student). Each enrollee in the allied health program has to fulfill certain academic prerequisites. The prime sponsor is not willing, however, to pick up the training costs for enrollees until all academic prerequisites had been completed because these

prerequisites could be fulfilled through adult basic education rather than using CETA funds. The prime sponsor does, however, pay allowances to enrollees during the academic training.

Classroom training is not done at community colleges to a larger extent because of two reasons. First, community colleges are unionized so that the costs of setting up class size training tailor made for CETA clients would be very high. Also local community colleges do not adequately monitor student attendance. The payment of stipends is directly linked to the number of hours each student attends class. If monitoring is inadequate, a student could receive regular stipends for poor attendance.

The Chicago Urban Skills Institute or the Dawson Skill Center was built with Economic Development Administration funds, while MDTA funds supported it with supplies, staff, equipment, and administrative costs. Seventy percent of its current funding comes from CETA and the remaining 30 percent is paid by the Illinois Office of Education for public aid students. They receive no funding from state vocational education funds. A representative of the prime sponsor's office sits on the Skill Center's Advisory Council. That Council's main function is curriculum development.

The quality of training and the placement rates at the skill center are good but the cost of training is very high. Training at private schools is much less expensive. The

costs at the skills center are so high because they are housed in a large, modern building and use very sophisticated equipment, both of which are not used at full capacity. Even if costs were lower, however, the prime sponsor probably would not fund all its classroom training at the skills center because funding of a variety of institutions promotes a desirable competitiveness.

The Skills Center is facing a problem with the Illinois Community College Board. The skill center is a state institution which gets no state money except through public aid. The reason for this is that they have only partial approval from the state community college board and are having difficulty obtaining full approval. Some speculate that the state fears that full approval of the skill center would cause an influx of other institutions in the state also seeking approval to increase their potential funding sources.

Community based organizations also provide some classroom training. They are equipped to provide a full range of services from recruiting to follow-up. They are, however, limited in the number of occupations in which they are prepared to offer classroom training. The local SER, for example, only offers clerical training while OIC offers only automotive and clerical training.

### Five Percent Funds

The State of Illinois received a total of \$3,410,446 from the Department of Labor as its five percent share of CETA Title I funds designated for vocational education. Ten percent of that amount (\$341,045) was allotted for administrative costs. (Ten percent of each individual prime sponsor's share was designated for administrative costs directly related to the operation of training programs) Chicago's share of the five percent funds in FY 1977 is \$1,140,700. Ten percent of that amount or \$141,070 stayed with DAVTE for administrative expenditures. Individual training agencies identify all costs which are administrative.

In dividing the five percent funds among Illinois' prime sponsors, the Governor's Office used a formula based on an index of needs. The formula weighed each jurisdiction against the rest of the state using the following four variables:

- (1) families living below the poverty level (1970 census);
- (2) males aged 15-44 and females 20-49 with less than an eighth grade education (1970 census);
- (3) average monthly AFDC (Aid to Families with Dependent Children) payment (1975 Department of Public Data); and
- (4) average monthly number of unemployed.

A non-financial agreement was negotiated with DAVTE which called for the use of the five percent funds to supplement classroom training funded under Chicago's basic Title I grant.

The five percent funds cover the cost of tuition fees for 880 training slots. Assessments, allowances, and other supportive services for enrollees in those slots are paid out of Title I. These 880 slots are in addition to the nearly 2,000 slots funded strictly out of Title I.

The specific occupations for which classroom training is offered are based on the Acceptable Occupations List (AOL) as are any CETA classroom training programs. The predicted occupational needs on the AOL reflect both traditional entry level skill needs as well as higher skill training. The expressed need for higher skill training is based on an anticipated economic upturn.

Five percent funds are used primarily for classes at the Chicago Urban Skills Institute. Training will be provided in the following skill areas:

|                              |                          |
|------------------------------|--------------------------|
| Clerk Typist                 | Tool and die             |
| Accounting Clerk             | Drafting                 |
| Stenographer                 | Licensed practical nurse |
| Machine set-up and operation | Welding                  |

Training appropriation funded under the five percent monies are available to all CETA applicants in the same manner as training funded under Title I. The five percent funds are completely integrated into Chicago's comprehensive manpower delivery system. This is untrue in so many prime sponsor jurisdictions and has been a major obstacle to providing

coordinated manpower services to clients.

Coordination

Chicago is an excellent example of a CETA prime sponsor working closely with the vocational education system.

Rather than contract with individual agencies, the prime sponsor contracts with the Illinois Department of Adult Vocational and Technical Education for all its classroom training. Early planning and a recognition of DAVTE's capabilities led to such a comprehensive agreement. Because of this good relationship, Chicago spends much more than its five percent funds on classroom training. The prime sponsor and DAVTE work together for the benefit of the CETA client needing skill training.

## Erie, Pennsylvania

Erie, Pennsylvania is located on Lake Erie, 100 miles east of Cleveland, Ohio. Approximately 130,000 people reside in the City.

The City has a Mayor-Council form of government (seven councilman). The Director of the City's CETA office meets weekly with the mayor to discuss their local CETA program.

Erie's economy is based primarily on manufacturing, with General Electric being its major employer. General Electric manufactures transit equipment and heavy machinery such as locomotives. General Electric's industrial need creates a local demand for skilled machinists and welders. Local Erie manufacturers also produce chemicals and paper.

Erie's involvement in manpower activities dates back to pre-CETA days when under the categorical system, they operated a Comprehensive Area Manpower System (CAMPS) grant. That program involved a limited funding level. In FY 1973, Erie's CAMPS grant was \$47,000. As a CETA prime sponsor, Erie received \$1,108,011 in Title I funds for FY 1976. Approximately, two thirds of Title I funds today are used to provide classroom training at three different institutional settings. Erie's major commitment to classroom training as the dominant mode of providing skills to the disadvantaged is a reason for its selection as a good case study site. Classroom training for Erie is provided by the following

three institutions:

(1) Tech Memorial School

This institution also known as "Twin Tech", is a secondary vocational school in the daytime and an adult education center in the evening.

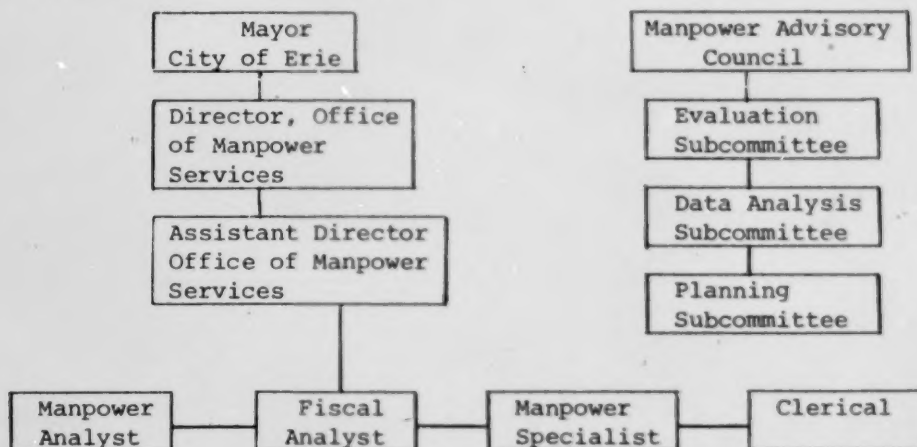
(2) County Voc/Tech School

Another secondary institution in the daytime and adult education center in the evening. Construction is currently near completion for a regional skills center adjacent to the county/vocational technical school. The new regional skills center will be an extension of the current facility and will serve exclusively an adult population. Classes will be offered at all times of the day, and will therefore be more accessible to CETA clients.

(3) Opportunities Industrialization Center (OIC)

This is a full service community based organization with a historical involvement in manpower activities.

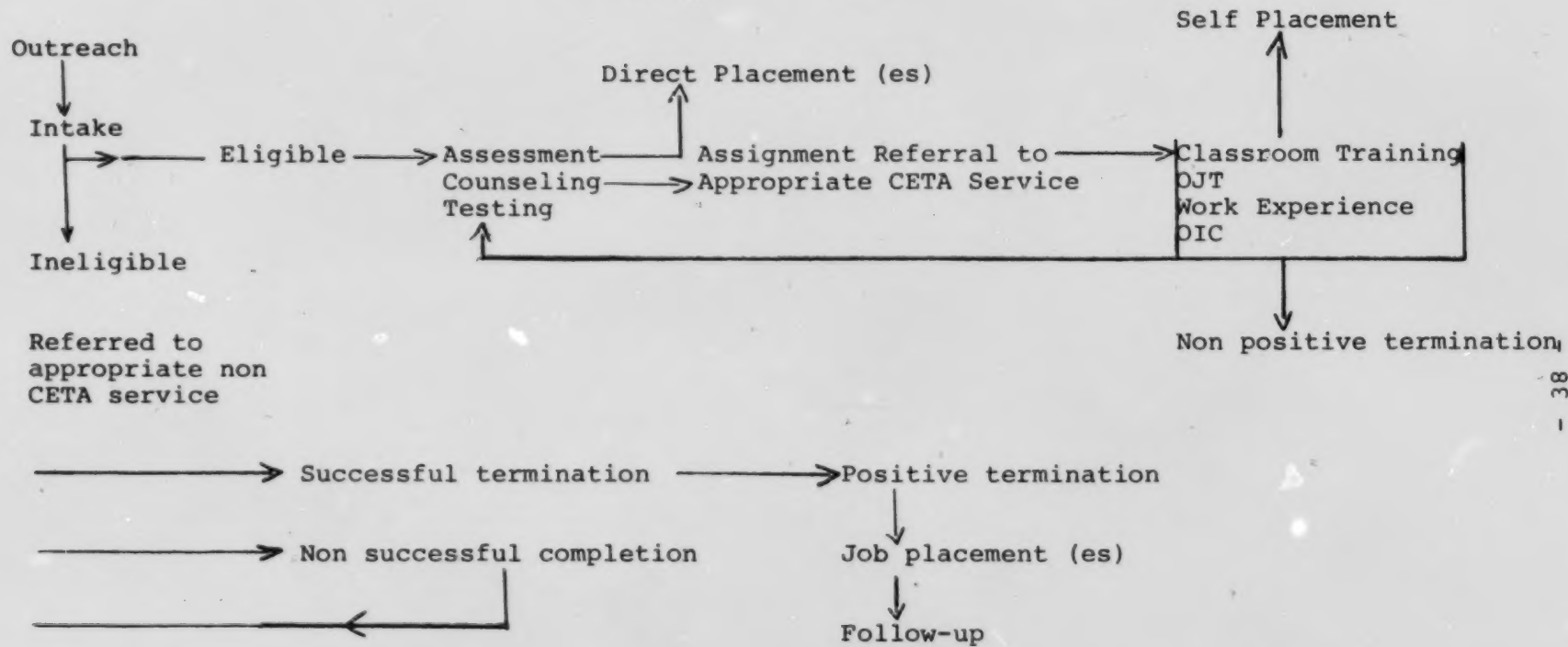
Erie's Office of Manpower Services is a small operation. The staff consists of only five professionals and is structured as follows:



In addition to classroom training, Erie's Title I program includes on-the-job training and work experience components. Skill training is offered in auto mechanics, general office practice, etc.

Stipends and other supportive services are paid to skill training enrollees. The following flow chart traces the route taken by a prospective CETA client from the initial entrance stage through termination from the program.

# ENROLLEE FLOW CHART



- 38

## Classroom Training

Erie, as a CETA prime sponsor has chosen classroom training over on-the-job training or work experience for its predominant mode of skill training. Classroom training and OJT have proven to be approximately equal in effectively developing job skills, but classroom training is generally less costly and carries no prior skill requirements on the part of a client. The prime sponsor did indicate, however, that job placement rates for OJT were better than for those having completed classroom training. The better placement rates are attributable to the fact that in an OJT program, each person has a job commitment prior to entering training.

The Office of Manpower Services receives many proposals from training institutions seeking CETA funding for the provision of classroom training. Determination of the demand for specific skills is based on the Employment Service Area of Needs Survey. That device alone, however, is inadequate in reflecting total labor market needs because the Employment Service (ES) does not contact private industry to seek out jobs. Instead, its Area of Needs Survey reflects an ongoing listing of jobs kept on file as ES is notified of their availability. To supplement ES's Area of Needs Survey, the prime sponsor uses the annual Skills Needs Survey compiled by the Manufacturers' Association of Erie. The manufacturing survey represents data supplied by approximately 90 companies, or 60 percent of the area's skilled manufacturing employment.

(A copy of the Skill Needs Survey of Manufacturers can be found in the appendix).

The City of Erie does not have a comprehensive contract with the State Department of Vocational Education for all its classroom training activities, as does the City of Chicago. Erie's entire CETA program is a much smaller operation than that of Chicago, both in terms of available resources and the number of contracts it can fund with those resources. The staff of the Office of Manpower Services reviews its own proposals and makes recommendations to the Mayor and the Manpower Advisory Council. In addition, the Manpower Advisory Council makes its own recommendations to the Mayor.

The prime sponsor does give priority consideration in awarding training contracts to local institutions who have successfully provided training in the past. After those agencies have received priority, agencies who have had other types of CETA contracts are considered. Only after the above two categories have been eliminated, are new program operators considered.

#### Five Percent Funds

Erie's share of CETA five percent vocational education funds for FY 1977 is \$56,093. The State used a distribution formula based on four variables, each having equal weight.

They are:

- (1) 25 percent of the funds on the basis of population, utilizing a 1975 projection;
- (2) 25 percent of the funds on the basis of the number of persons in the area who had less than \$4,000 taxable income in 1972;
- (3) 25 percent of the funds on the basis of the average number of unemployed persons between October 1974 and March 1975 in the area; and
- (4) 25 percent of the funds on the basis of number of persons ages 20 to 49 with no high school education in the area based on the 1970 census figures.

The City of Erie negotiated a non-financial agreement with the State Bureau of Vocational Education. The agreement calls for the creation of two classroom training programs, both to be operated by the Erie School District at the Technical Memorial School. Technical Memorial is a state vocational education institution for secondary education during the daytime and adult education in the evenings. Because it has dual function, it is also called "Twin Tech."

The two CETA classes funded with the five percent funds, train enrollees with the skills to become secretaries and Building Maintenance Technicians. Seventy five CETA enrollees are participating in the 17 week secretarial skills class. Twenty nine CETA clients are participating in the 16 week Building Maintenance Technician program.

Determination of the demand for the two skill training

programs was based on the Skill Needs Survey of the Manufacturer's Association of Erie and by information gathered by the local Employer Service.

Because it is the only state accredited institution, all CETA five percent funds are spent within the Erie School District (Tech Memorial School). The state is reluctant to agree to the funding of non-accredited institutions. This is precisely the inflexibility that has caused strained relationships between many other prime sponsors and their respective states. In Erie, however, the school district has satisfied the prime sponsor with the quality of its training so that the five percent funds are spent without regrets. The prime sponsor indicated, however, that they would go elsewhere with the five percent funds if training was inferior in quality.

#### Coordination

Coordination of vocational education and CETA activities is accomplished primarily through good personal relationships and through the prime sponsor's participation on various local advisory committees. The county vocational/technical school has a series of advisory committees. The prime sponsor is represented on two of those committees. One of those is the coordinating committee, whose function is to investigate potential funding sources. The school is part of the state education system, but funding to date has come from a variety

of sources including state vocational education, HUD, and private industry. A good example of private industry's involvement occurred when General Electric set up their own machine shop in the school, at no cost to the institution. General Electric's purpose in doing so was to train individuals on the same machines as they use in their own plant. The prime sponsor is also a member of the Craft and Skills Advisory Committee which designs the curriculum of the county vocational/technical school. Others on the committee are the personnel of the institution, other educators, and private industry.

The prime sponsor has also been invited to participate on a regular basis on the following other advisory committees outside of the skill center:

(1) Erie School District Advisory Committee--

discusses vocational education at both the secondary and adult levels in the local school system.

(2) Erie Employment Task Force--

a diversified, local group of citizens (no direct connection to the state vocational education system). The purpose of the committee is to increase employment through industrial development. The group develops strategy for retaining industry currently located in Erie and for attracting new industry to the City.

(3) Youth Advisory Council--

a youth services coordinating committee, which tries to coordinate the activities of all local agencies servicing youth.

The above groups are strictly advisory in nature and have no real authority to plan or implement any CETA or state vocational education programs. Because they do offer the opportunity for dialogue between various segments of the community, they are of importance in generating future joint planning ventures.

The prime sponsor has not, to this date, been asked for any input into the activities of the State Advisory Council on Vocational Education. They are, however, hopeful that the future will bring a change in that policy.

The relationship of the Office of Manpower Services with the CETA program agents has been quite good. The coordinator of vocational education for the Erie School District indicated that the CETA Administrator is always accessible to discuss any problems which occur. He did say, however, that he was not pleased with the vast amount of paperwork that the CETA system required of program agents.

The Director of Adult Education for the Erie County Vocational Technical School concurred with the good sentiments of the school district coordinator concerning Erie's CETA program. He did, however, have a few critical comments relating to the CETA Act. One of his concerns is that too much CETA money is spent on rehabilitation. He indicated that he would like to see a section added to CETA which would carry with it a level of funding aimed at providing rehabilitation

services. Those services would include attitudinal preparation for the world of work. Title I money would then be used for more direct skill training. He also expressed the view that CETA should not have to operate on a one year basis, five year cycles and advance knowledge of funding would also allow for better planning.

## Virginia Peninsula Manpower Consortium

The Peninsula Manpower Consortium is composed of six jurisdictions. They are the cities of Hampton, Newport News, Poquoson, Williamsburg and the Counties of James City and York. The land area of the peninsula covers 400 square miles between the York and James River where the Chesapeake Bay joins these rivers to form the Hampton Roads. The population of the area is 340,000 (1977 figure). The area is located 180 miles southeast of Washington, D. C.

The peninsula area includes both urban and rural populations but is generally considered as one labor market. The economy of the area is based on military installations and other defense related activities, shipbuilding, and tourism. Fifty-five to 60 percent of all jobs in the peninsula are in those fields. The excellent harbor and port facilities are responsible for most of the economic activity in the area. The two largest employers in the peninsula region are the Newport News Ship Building and Drydock Company and Liebherr America which produces cranes and other earthmoving equipment.

The cities in the consortium have a council/city manager form of government. The city manager is the chief administrative official responsible to the council. The council, elected by the people, in turn selects the mayor from its elected members.

The counties in the consortium have a board of Supervisors/county administrator form of government. The county administrator

is selected by the board. The board of supervisors is elected by the people and selects its chairman from among its elected members.

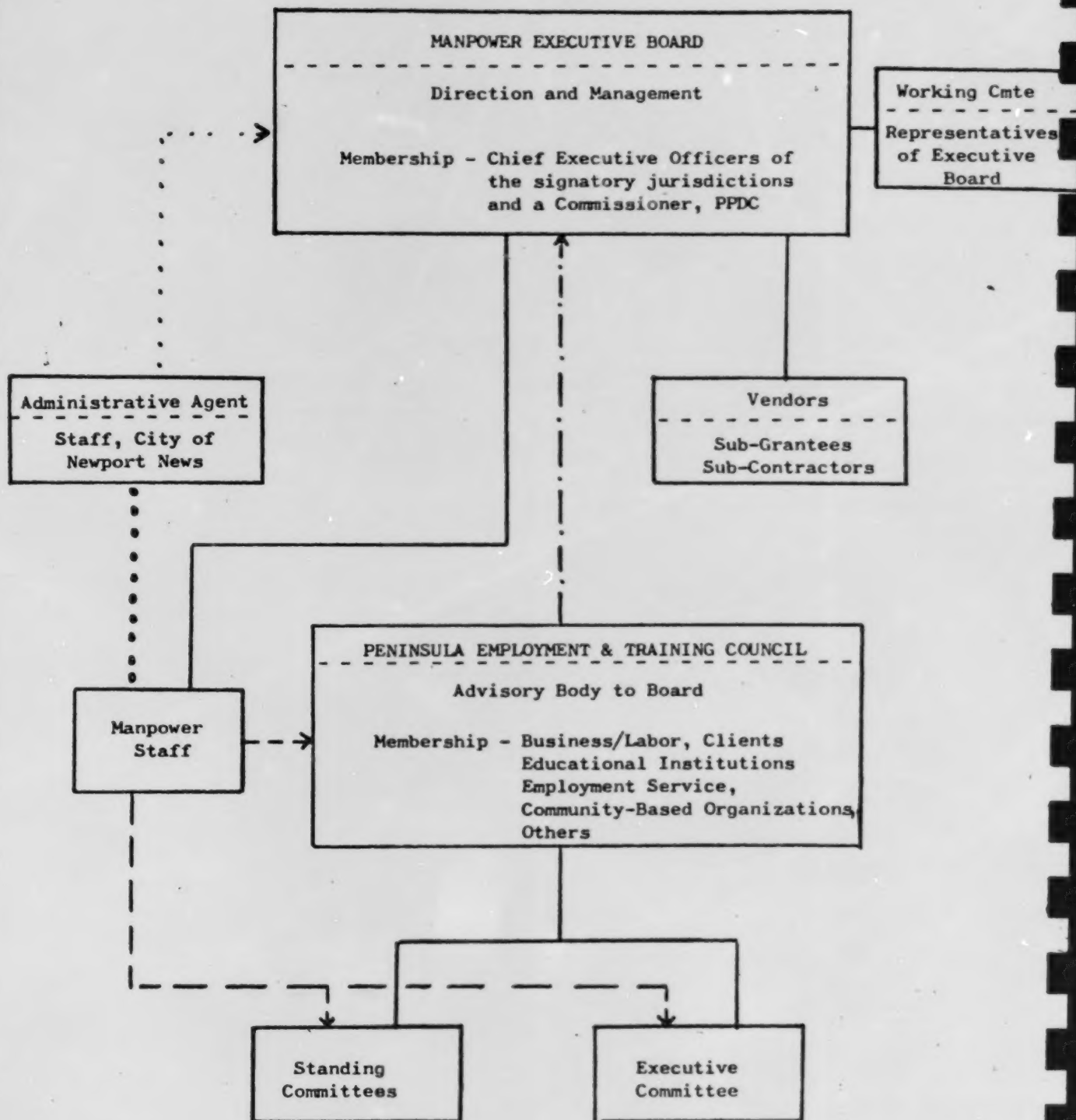
In early 1974, a consortium agreement was signed by the Cities of Hampton, Newport News, Williamsburg, Poquoson and James City County and York County. The purpose of the agreement was to establish and manage a comprehensive manpower service delivery system under the authority of CETA. The consortium is known as the Peninsula Office of Manpower Programs (POMP).

The Peninsula Office of Manpower Programs is directed by a Manpower Executive Board composed of the Chief Executive Officers of each of the jurisdictions and a Commissioner, Peninsula Planning District Commission. The City of Newport News is the Administrative Agent for the Consortium and must provide fiscal and other administrative services. The Manpower Executive Board has appointed a manpower staff to assist in managing the CETA program. That staff is divided into three units - planning, operations, and evaluation. Also, in accordance with the CETA legislation, the Executive Board has appointed a manpower advisory council (Peninsula Employment and Training Council). Membership on that council includes business, labor, education, community based organizations, etc. Eight members of the council (29 total members) sit as representatives of education. Several others, however, are situated in educational institutions but serve on the council as

representatives of groups such as veterans and the handicapped.

The following is an organizational chart of the operational structure of the Peninsula Manpower Consortium.

**ORGANIZATION**  
**PENINSULA OFFICE OF MANPOWER PROGRAMS**



\_\_\_\_\_ Direction  
 ----- Staff Support  
 - - - - - Advice  
 ..... Designated Support Services  
 ..... Coordination

Recruitment for CETA programs is carried out by various agencies in the peninsula including the area school systems, social service departments, parole and probation offices and various service organizations. Potential CETA clients are then referred to one of five Manpower Service Centers where they go through an initial assessment process. Job ready applicants are then referred to the Virginia Employment Commission (VEC). Non-job ready applicants are referred to POMP assessor/counselor where the needs of applicants are determined.

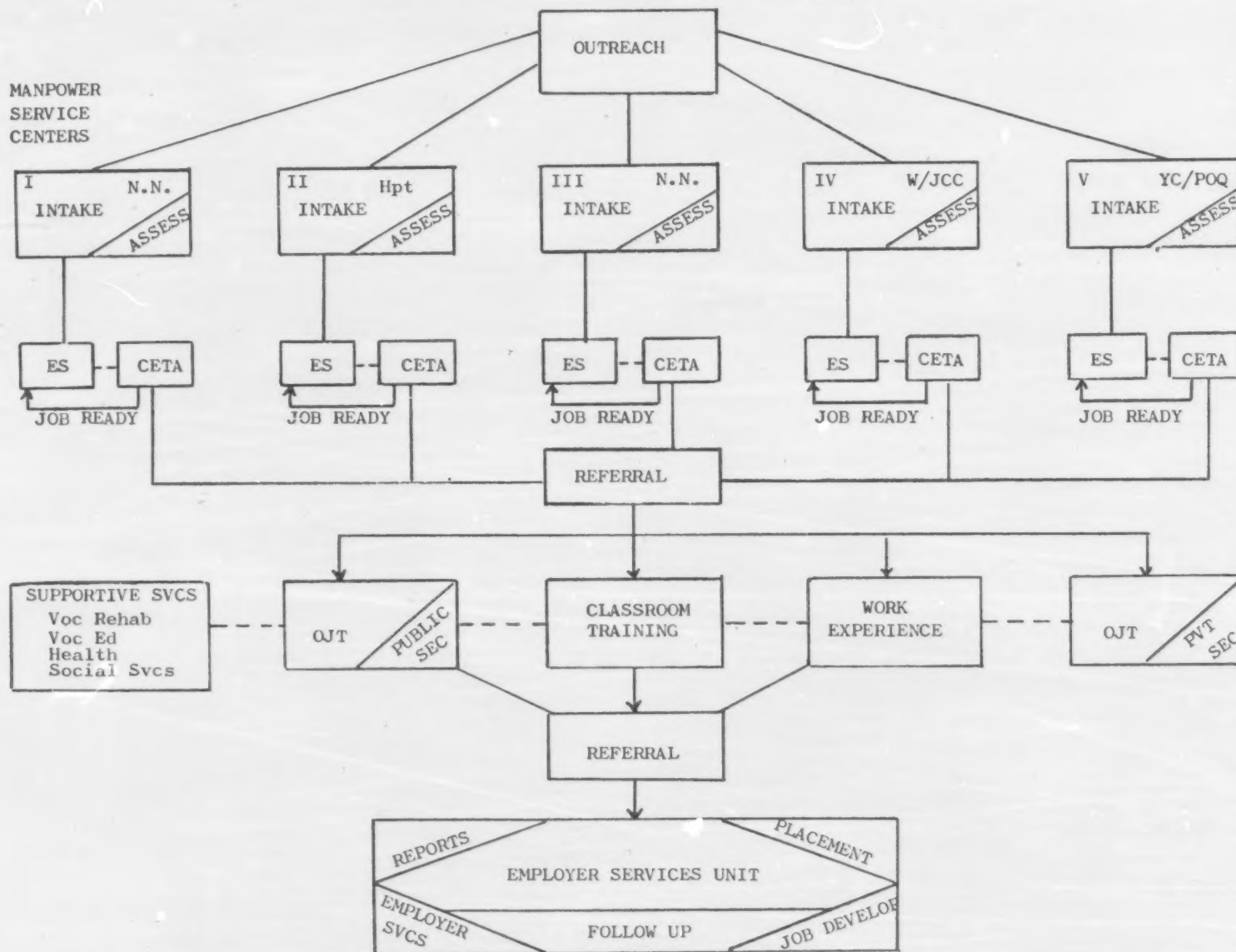
Following the advice of the Peninsula Employment and Training Council, the Manpower Executive Board reviews current and prior year performance of its subcontractors and gives planning guidance to "selected delivery agents of demonstrated effectiveness." POMP also considers proposals from new deliverers with innovative proposals.

Public or private-non profit agencies serving as subcontractors in each jurisdiction are responsible for the delivery of CETA agencies. POMP also subcontracts with the Virginia Employment Commission for services such as intake/assessment, central participant records, employer services, and allowance payments. The Peninsula Training Skill Center and the Thomas Nelson Community College serve as subcontractors for the entire consortium. The Newport News Office of Human Affairs (OHA), a community action agency, is the subcontractor for the residents of Newport News, York County, and Poquoson. The Hampton Manpower

Services Project, a department of the municipal government serves as subcontractor for Hampton residents. The Williamsburg/James City County Community Action Agency is the subcontractor for those two jurisdictions. These local agencies operate the classroom training, work experience, on-the-job training, public service employment and summer youth programs. They also, however, "buy into" ongoing activities at the skill center and at Thomas Nelson Community College.

In addition, the prime sponsor, through a subcontract, funds the Employer Services Unit within the Employment Commission. Job ready CETA clients are referred there for job placement and follow-up. The following chart illustrates POMP's manpower delivery system.

# PENINSULA MANPOWER SERVICE DELIVERY SYSTEM



Determination of which skills to provide training in is based on recommendations of the Employment Commission. The decisions, however, are made by the Manpower Executive Board. Available financial resources and capital equipment are, of course, constraints which must be taken into consideration.

POMP's FY 1977 Title I training activities include classroom training, work experience, and on-the-job training. Classroom training serves 616 participants, while 335 people participate in work experience programs and 380 in on-the-job training programs.

#### Classroom Training

The price tag for POMP's total FY 1977 Title I program is \$2,263,403. Out of that amount \$821,391 is allocated to classroom training activities. That amount, is in addition to the Consortium's \$151,649 share of five percent vocational education funds, bringing the total amount to \$973,000. The prime sponsor also operates a coupled training program in which classroom training is combined with work experience or on-the-job training. The \$973,000 sum does not, however, include funds for the coupled program which are cost categorized under work experience or on-the-job training.

All enrollees in CETA classroom training receive supportive services including allowance payments, and transportation. Also, some enrollees receive child care services and medical care.

A total of 1,612 participants are receiving classroom training under the consortium's FY 1977 CETA program. The Peninsula Manpower Training Skill Center is the largest recipient of classroom training funds. That institution is part of the state education system and was the former deliverer of MDTA training. All the member jurisdictions of the consortium buy training at the skill center, which conducts CETA funded classes in the following six occupational areas:

Bricklaying

Electronics (Radio & TV Repair)

Auto Mechanics

Clerical

Welding

Production Machine Operation

All classes at the skill center are conducted on an open-entry open-exit system. The skill center is receiving a total CETA funding of \$638,099 in FY 1977. (prime sponsor--\$846,450; Vocational Education five percent--\$151,649).

Skill center instructors are selected journeymen. After selection, instructors take several teaching methods courses. The skill center also provides classroom training for CETA participants in the coupled program, through a memorandum of

understanding with the Hampton Manpower Services Project and the Office of Human Affairs. Each participant attends classes at the skill center at least one full day per week coupled with their OJT or work experience program. Training at the skill center has been quite good. The only unsatisfactory training has been in the training of clerical skills. The problem seems to be in the quality of the instructors. Improvement in this is anticipated in the future.

The Office of Human Affairs provides classroom training in licensed practical nursing to CETA eligible residents of Newport News, York County, and Poquoson. That training program has a funding base of \$161,164 and serves 64 participants.

The Hampton Manpower Services Project provides classroom instruction to high school dropouts in Hampton which leads to a high school equivalency diploma (GED). Coupled training is also done with their OJT and work experience programs. The Hampton subcontractor also buys slots in the "CETA Goes to College Program" at the Thomas Nelson Community College.

Finally, Williamsburg/James City County Community Action Agency provides classroom training to upgrade job skills for the underemployed.

The "CETA Goes to College Program" is a Title I program operated within the Thomas Nelson Community College. The pilot program was initiated by Thomas Nelson Community College at the suggestion of the Prime Sponsor and approval by the Governor's

Manpower Services Council in September, 1975. Funding for the project came from the four percent state manpower services council (four percent of the funds available under Title I of CETA are allocated to the States for State use in providing services). Selected CETA eligible persons are enrolled in occupational skill training programs at the community college. Tuition and books are fully paid for out of CETA funds. Students are not segregated from non-CETA students at the institution.

The pilot program concept proved viable and in FY 1977 POMP decided to "buy into" the program. In fact, POMP will pick up the entire cost of operating the program in FY 1978 as the state phases out its participation.

An individual must be unemployed and "economically disadvantaged" (person whose combined family income has not in the twelve (12) months preceding enrollment exceeded current poverty guideline amounts per family, as established by OMB) to be eligible for the "CETA Goes to College Program". In addition, because it is an academic program, high school graduation or GED is required. Candidates are determined by the CETA assessor/counselor at each manpower service center and then selected from the entire peninsula on a quota basis.

Sixteen curriculum areas are offered in the program. In addition, the curriculum includes a unit devoted to preparing students for job interviewing.

### Five Percent Funds

On FY 1977, the State of Virginia received a total of \$1,783,985 from the Department of Labor as its five percent share of CETA Title I funds designated for vocational education. Of that amount, POMP received \$112,213. The Manpower Training Service, Division of Vocational Education is the administering agency. The distribution of funds was determined by dividing the total of all ten Virginia prime sponsor's Title I allocations into each individual prime sponsor Title I allocation. The state manpower services council approved the distribution formula.

The State of Virginia does not take any of the five percent funds for its own administrative costs. State administration is funded through the four percent state manpower services money. Therefore, all the five percent vocational education funds are made available to prime sponsors for use in their jurisdictions.

POMP's share of the five percent funds is being used to supplement the cost of classroom training at the local skills center. Training at the skills center takes place in six occupations (auto mechanics, bricklaying, clerk typing, machine operating, radio and television repair, and welding).

### CETA - Vocational Education Cooperation

Cooperation between the peninsula prime sponsor and the vocational education system is quite good. The Manpower Training Service, a division of the State Department of Education, is funded by the Governor's four percent CETA funds and is tied to the Manpower Services Council. This coordinated approach results in the allocation of all five percent vocational education funds directly to local prime sponsors, while the Governor's four percent funds establishes the staff to administer the program. The fact that the State Department of Education has, within its own structure, a CETA funded division is of major importance. That division (Manpower Training Service) is asked for guidance in the preparation of the state vocational education plan and other matters relating to skill training in the State of Virginia.

Coordination of CETA and vocational education activities in the peninsula area occurred largely because of an evolutionary process of interaction and a mutual concern for the constituent population. For example, through on-site visits, the POMP staff and staff of the State Manpower Training Service jointly monitor training activities at the Peninsula Manpower Training Skill Center. Also in order to avoid duplication, the State Department of Education includes statewide CETA activities in its annual and five year vocational education plan.

The Director of the POMP staff is a member at large of the State Advisory Council on Vocational Education. As such, he does

not directly represent the prime sponsor on the council, but his membership provides the council with the expertise of someone whose profession is the management of CETA programs.

Cross representation on various related committee's is further evidence of a coordinated effort between CETA and vocational education. The following are examples of some of those committees.

- (1) State Plan Committee - a subcommittee of the State Advisory Council on Vocational Education. A representative of the State Manpower Services Council serves on this committee. The mission of the committee is to adapt the state vocational education plan to the Education Amendments of 1976.
- (2) Peninsula Employment and Training Council - The prime sponsor's manpower advisory council includes representatives of the five school systems and the Community College included in the consortium.
- (3) Newport News Advisory Council on Vocational Education - a POMP staff person serves on this newly created local advisory council.

(4) Peninsula Adult Education Committee -

membership on this committee is composed of the five education systems, the Community College, and the six jurisdictions. The POMP Staff Director is a member of this committee.

APPENDIX

Chicago's  
The Acceptable Occupations List

| <u>Occupation Number</u> | <u>Occupation List</u>                                                                                                                                          |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. 76                    | Therapist                                                                                                                                                       |
| 2. 80                    | Inhalation therapist<br>Clinical laboratory technician and technician<br>Medical laboratory technician<br>Certified laboratory technician<br>Medical technician |
| 3. 82                    | Health record technologist and technician                                                                                                                       |
| 4. 83                    | Medical assistant<br>Radiological Technologist                                                                                                                  |
| 5. 85                    | Health technologist and technician<br>Dietetic technician<br>Optometric technician                                                                              |
| 6. 151                   | Chemical technician                                                                                                                                             |
| 7. 152                   | Draftsman                                                                                                                                                       |
| 8. 153                   | Electrical and electronic engineering technician                                                                                                                |
| 9. 162                   | Engineering and science technician                                                                                                                              |
| 10. 216                  | Manager and superintendent, buildings                                                                                                                           |
| 11. 280.2                | Sales representative, wholesale trade                                                                                                                           |
| 12. 281.7                | Salesmen, retail                                                                                                                                                |
| 13. 303                  | Billing clerk                                                                                                                                                   |
| 14. 305                  | Bookkeeper                                                                                                                                                      |
| 15. 312                  | Clerical Supervisor                                                                                                                                             |
| 16. 313                  | Collector, bill and account                                                                                                                                     |

|     |     |                                                |
|-----|-----|------------------------------------------------|
| 17. | 315 | Dispatcher and starter,<br>vehicle             |
| 18. | 323 | Expediter and production<br>control            |
| 19. | 331 | Mail carrier, post office                      |
| 20. | 341 | Bookkeeper and billing<br>machine operator     |
| 21. | 342 | Calculating machine<br>operative               |
| 22. | 343 | Computer and peripheral<br>equipment operative |
| 23. | 345 | Key punch operative                            |
| 24. | 360 | Payroll and timekeeping<br>clerk               |
| 25. | 361 | Postal clerk                                   |
| 26. | 374 | Shipping and receiving clerk                   |
| 27. | 375 | Statistical clerk                              |
| 28. | 376 | Stenographer                                   |
| 29. | 381 | Stock clerk and storekeeper                    |
| 30. | 384 | Telephone operator                             |
| 31. | 390 | Ticket station and express<br>agent            |
| 32. | 391 | Typist                                         |
| 33. | 394 | Miscellaneous clerical<br>worker               |
| 34. | 372 | Secretary                                      |
| 35. | 402 | Baker                                          |
| 36. | 413 | Cabinet maker                                  |
| 37. | 410 | Brickmason and stonemason                      |
| 38. | 412 | Bulldozer operator                             |

|     |            |                                                                                                           |
|-----|------------|-----------------------------------------------------------------------------------------------------------|
| 39. | 415        | Carpenter                                                                                                 |
| 40. | 430        | Electrician                                                                                               |
| 41. | 436        | Excavating operator                                                                                       |
| 42. | 510        | Painter, construction and<br>maintenance                                                                  |
| 43. | 522<br>523 | Plumber and pipe fitter<br>Plumber and pipe fitter<br>apprentice<br>Plumber and pipe fitter<br>apprentice |
| 44. | 550        | Structural metal craftsman                                                                                |
| 45. | 424        | Craneman, derrickman,<br>hoistman                                                                         |
| 46. | 455        | Locomotive engineer                                                                                       |
| 47. | 470        | A/C heating, refrigeration<br>mechanic                                                                    |
| 48. | 471        | Aircraft mechanic                                                                                         |
| 49. | 472        | Auto body repairman                                                                                       |
| 50. | 473        | Auto mechanic                                                                                             |
| 51. | 481        | Heavy equipment mechanic                                                                                  |
| 52. | 482        | Household appliance installer<br>and mechanic                                                             |
| 53. | 485<br>491 | Radio and television repairman<br>Mechanic apprentice, exc. auto                                          |
| 54. | 492        | Miscellaneous mechanic and<br>repairman                                                                   |
| 55. | 446        | Heat treater                                                                                              |
| 56. | 454        | Job and die setter, metal                                                                                 |
| 57. | 461        | Machinist                                                                                                 |
| 58. | 502        | Millwright                                                                                                |
| 59. | 503        | Molder, metal                                                                                             |

|     |     |                                                |
|-----|-----|------------------------------------------------|
| 60. | 514 | Pattern and model maker,<br>exc. paper         |
| 61. | 533 | Roller and finisher, metal                     |
| 62. | 535 | Sheetmetal worker and<br>tinsmith              |
|     | 536 | Sheetmetal worker and<br>tinsmith apprentice   |
| 63. | 561 | Tool and die maker                             |
| 64. | 422 | Compositor and type setter                     |
| 65. | 515 | Photo engraver and litho-<br>grapher           |
| 66. | 530 | Pressman and plate printer,<br>printing        |
|     | 531 | Pressman apprentice                            |
| 67. | 552 | Telephone installer and<br>repairman           |
| 68. | 563 | Upholster                                      |
| 69. | 602 | Assembler                                      |
| 70. | 610 | Checker, examiner, inspector,<br>manufacturing |
| 71. | 612 | Cutting operative                              |
| 72. | 631 | Meat cutter and butcher,<br>exc. manufacturing |
| 73. | 621 | Filer, polisher, sander,<br>buffer             |
| 74. | 622 | Furnaceman, smelterman,<br>pourer              |
| 75. | 635 | Metal plater                                   |
| 76. | 656 | Punch and stamping press<br>operative          |
| 77. | 665 | Solderer                                       |
| 78. | 680 | Welder and flame cutter                        |

|     |     |                                             |
|-----|-----|---------------------------------------------|
| 79. | 650 | Drill press operative                       |
| 80. | 651 | Grinding machine operative                  |
| 81. | 652 | Lathe and milling machine<br>operative      |
| 82. | 653 | Precision machine operator                  |
| 83. | 666 | Stationary fireman                          |
| 84. | 681 | Winding operative                           |
| 85. | 690 | Machine operative                           |
| 86. | 695 | Miscellaneous machine<br>operator           |
| 87. | 703 | Bus driver                                  |
| 88. | 705 | Deliveryman and routeman                    |
| 89. | 706 | Forklift and tow-motor<br>operative         |
| 90. | 713 | Railroad switchman                          |
| 91. | 715 | Truck Driver                                |
| 92. | 921 | Dental assistant                            |
| 93. | 926 | Practical nurse<br>Licensed practical nurse |
| 94. | 931 | Airline stewardess                          |
| 95. | 935 | Barber                                      |
| 96. | 944 | Hairdresser and cosmetologist               |
| 97. | 961 | Fireman                                     |
| 98. | 962 | Guard and watchman security<br>guard        |
| 99. | 964 | Policeman and detective                     |

# MANUFACTURERS ASSOCIATION OF ERIE

ORGANIZED 1905 • INCORPORATED 1914

5 WEST TENTH STREET • ERIE, PENNSYLVANIA 16501

May 1976

Telephone / Area Code 814  
453-4454

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*President*  
J. DOUGLAS JAMES  
*Vice President*  
ALAN J. McDONALD  
*Treasurer*  
RAYMOND G. WEBER  
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*Personnel and Community Relations*  
*Zurn Industries, Inc.*

## SKILL NEEDS SURVEY OF MANUFACTURING

Your copy of the Erie labor market Skill Needs Survey of Manufacturing, May 1976 issue, is herewith submitted.

The manufacturing survey represents data furnished by more than 90 companies which employ over 60% of our skilled industrial workers. This base data was factored proportionately by type of industry to equal 100% of industry's skilled employment.

Fortune Magazine's October 1975 issue gave special mention of MAE's Annual Skill Needs Survey, referring to it as "probably the most accurate survey of local employment in the country..." The 1976 survey has been improved by adding an analysis of industrial replacement needs by individual occupations (Table 1) and type of industry (Table 2). In addition, the 1976 survey has included the gas, electric and telephone utilities. These companies have been added since many of the basic skills needed in these firms are closely related to the skill needs of area industry.

The annual Skill Needs Survey of Manufacturing:

- aids industry in future employment planning.
- assists School Boards and Administrators in implementing career education into local educational units based on the type of jobs available in the Erie area.
- provides Counselors and Teachers with occupational information to help students prepare for future job opportunities.
- aids the City and County Federal Manpower Program Administrators properly utilize over \$2,000,000.00 of training monies available.
- develops an awareness throughout the community of the occupational opportunities in industry.
- assists manpower program operators plan occupational training based on the jobs to be available in the Erie area.

Skill Needs Survey of Manufacturing

May 1976

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- assists Vocational Craft Committees and Vocational Instructors in planning the curriculum, equipment and facilities needed to provide proper instruction.
- most significantly has been a basic part of the proposal which has led to the Regional Occupation Skill Center presently under construction at 8500 Oliver Road. The building will be complete by November and equipped during January 1977.

The Manufacturers Association of Erie thanks those companies who participated in this year's survey and urges those who did not to consider to do so in the years ahead. A special thanks goes to the Bureau of Employment Security Statistician, Paul Weithman, who has been of great assistance in the preparation of this survey.

Please call the Association's office (814-453-4454) should there be any questions regarding the 1976 Skill Needs Survey of Manufacturing or recommendations for future editions.

*Max D. Gill*

Max D. Gill  
Assistant Director

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## FOREWORD

### SKILL NEEDS SURVEY - MANUFACTURING

#### Erie Labor Market Area

Over 90 area Industrial firms participated in the 1976 Skill Needs Survey. There are approximately 460 business establishments classified as Manufacturing in Erie County. Survey questionnaires were sent to 300 firms (the very small employers were omitted). The companies were classified in Standard Industrial Code groups 25 through 39 with 29 and 31 excluded due to the small employment and lack of returns in these industrial classifications. Standard Industrial Codes 48 and 49 which represent gas, electric and communication utilities were also included in the 1976 survey. The respondents represent nearly 60% of the area's skilled manufacturing employment. All data in Tables 1, 2 and 3 have been factored by SIC groups to equal 100% of the current labor market employment totals.

This is the first year Tables 1 and 2 have reported replacement needs by individual occupation and type of industry. A 4% annual loss/replacement need factor was applied. The 4% replacement need is a conservative estimate of loss of individuals employed due to death, retirement, relocation and etc.

#### TABLE 1

This table presents factored employment growth and replacement projections by occupation with sub-totals for occupational sections (i.e. Service, Productive, etc.). The following information is provided:

Column 1 - Occupations surveyed.

Column 2 - Total presently employed in occupation or occupational section.

Column 3 - Projected growth (additional job needs) in the occupation 1 year out.

Column 4 - Replacement need (loss of individuals employed due to death, retirement, relocation, etc.) in the occupation 1 year out.

Column 5 - Projected growth (additional job needs) in the occupation 3 years out. These figures are not cumulative; they represent additional job needs over and above those listed in Column 3.

Column 6 - Replacement need (loss of individuals employed due to death, retirement, relocation, etc.) in the occupation 2 and 3 years out. These figures are not cumulative; they represent additional job needs over and above those listed in Column 4.

Column 7 - Projected growth (additional job needs) in the occupation 5 years out. These figures are not cumulative figures; they represent additional job needs over and above those listed in Columns 3 and 5.

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Column 8 - Replacement need (loss of individuals employed due to death, retirement, relocation, etc.) in the occupation 4 and 5 years out. These figures are not cumulative; they represent additional job needs over and above those listed in Columns 4 and 6.

Table 2

This table gives estimated employment totals, factored as noted below, by Standard Industrial Codes (SIC) breakdowns. This table identifies both growth and replacement needs for 1, 3 and 5 years out. The following information is provided:

Column 1 - Two-digit SIC Number.

Column 2 - Two-digit SIC Industry Group Title.

Column 3 - Total present employment. These totals are the latest available (dated June 1975) Bureau of Employment Security SIC employment breakdowns.

Column 4 - Present skilled employment in job classifications surveyed, factored to 100%.

Columns 5-7-9 - Skilled employment growth totals by SIC 1, 3 and 5 years out.

Columns 6-8-10 - Skilled employment replacement need totals by SIC 1, 3 and 5 years out.

TABLE 3

This table presents actual cumulative industrial skill needs for both expansion (additional jobs) and replacement due to labor market removals (based on data provided by Table 1 and 2).

Line 1 - Total skilled employment projection in job classifications surveyed. When read horizontally, the 1977-1979-1981 employment totals are for each period and are not cumulative.

Line 2 - Projected needs resulting from expansion (additional new jobs). When read horizontally, figures are cumulative totals for 1, 3 and 5 year periods.

Line 3 - Projected replacement needs as a result of turnover losses due to people leaving the labor market (i.e. death, retirement, relocation, etc.). When read horizontally figures are cumulative totals for 1, 3 and 5 year periods.

Line 4 - Total projected needs - total of lines 2 and 3. When read horizontally figures are cumulative totals for 1, 3 and 5 year periods.

Skill Needs Survey Table 1 Manufacturing - Erie Labor Market Area

| .....OCCUPATION.....      | TOTAL              | .....P R O J E C T E D.....  |                               |                               |          |     |     |
|---------------------------|--------------------|------------------------------|-------------------------------|-------------------------------|----------|-----|-----|
|                           | PRSNLY<br>EMPLOYED | 1 YEAR OUT<br>GROWTH REPLCMT | 3 YEARS OUT<br>GROWTH REPLCMT | 5 YEARS OUT<br>GROWTH REPLCMT | COMMENTS |     |     |
| SERVICE                   |                    |                              |                               |                               |          |     |     |
| CARPENTER-MAINTENANCE     | 74                 | 8                            | 3                             | 11                            | 8        | 4   | 8   |
| CRANEMAN                  | 362                | 18                           | 15                            | 10                            | 31       | 13  | 32  |
| ELECTRICIAN-MAINTENANCE   | 241                | 5                            | 10                            | 20                            | 21       | 11  | 22  |
| HELPER-TRADES             | 287                | 17                           | 12                            | 13                            | 25       | 20  | 27  |
| JANITOR                   | 7                  |                              |                               |                               | 1        | 9   | 1   |
| INSPECTOR                 | 890                | 54                           | 38                            | 77                            | 80       | 81  | 86  |
| LIFT TRUCK OPERATOR       | 598                | 9                            | 24                            | 20                            | 50       | 24  | 52  |
| MAINTENANCE-GENERAL       | 430                | 21                           | 18                            | 23                            | 38       | 27  | 40  |
| MAINTENANCE-MACHINIST     | 181                | 9                            | 8                             | 9                             | 16       | 4   | 16  |
| MAINTENANCE-WELDER        | 60                 | 2                            | 3                             | 1                             | 5        | 7   | 6   |
| MILLWRIGHT                | 266                | 10                           | 11                            | 24                            | 23       | 21  | 25  |
| MODEL OR INSTRUMENT MAKER | 46                 | 2                            | 2                             |                               | 4        |     | 4   |
| OILER                     | 62                 | 6                            | 3                             | 6                             | 6        | 7   | 6   |
| PIPEFITTER                | 199                | 8                            | 8                             | 5                             | 17       | 3   | 17  |
| SHIPPER AND/OR RECEIVER   | 515                | 11                           | 21                            | 37                            | 44       | 36  | 47  |
| STOCKKEEPER               | 518                | 6                            | 21                            | 24                            | 44       | 33  | 47  |
| TESTER                    | 643                | 13                           | 26                            | 22                            | 54       | 31  | 56  |
| TOOL DIE OR GAUGE MAKER   | 609                | 39                           | 26                            | 57                            | 55       | 68  | 61  |
| TOOL GRINDER              | 150                | 10                           | 6                             | 11                            | 14       | 12  | 15  |
| TOOL KEEPER               | 72                 | 1                            | 3                             | 5                             | 6        | 8   | 7   |
| TOOL ROOM MACH OPERATOR   | 136                | 13                           | 6                             | 17                            | 13       | 6   | 14  |
| TRUCK DRIVER              | 211                | 18                           | 9                             | 10                            | 19       | 3   | 20  |
| WATERTENDER               | 38                 |                              | 2                             |                               | 3        |     | 3   |
| NOT ELSEWHERE CLASSIFIED  | 944                | 10                           | 38                            | 31                            | 78       | 22  | 80  |
| TOTAL                     | 7,539              | 290                          | 313                           | 433                           | 655      | 450 | 692 |

| .....OCCUPATION.....      | TOTAL<br>PRSNLY<br>EMPLOYED | .....P R O J E C T E D.....  |                               |                               |       |       |       | COMMENTS |
|---------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------|-------|-------|-------|----------|
|                           |                             | 1 YEAR OUT<br>GROWTH REPLCMT | 3 YEARS OUT<br>GROWTH REPLCMT | 5 YEARS OUT<br>GROWTH REPLCMT |       |       |       |          |
| PRODUCTIVE                |                             |                              |                               |                               |       |       |       |          |
| ASSEMBLER-MECHANICAL      | 2,279                       | 181                          | 98                            | 207                           | 209   | 226   | 227   |          |
| ASSEMBLER-ELECTRICAL      | 1,879                       | 112                          | 80                            | 112                           | 166   | 65    | 172   |          |
| AUTOMATIC CHUCKER         | 146                         | 20                           | 7                             | 13                            | 14    | 13    | 15    |          |
| BORING MILL-HORIZ-VERT    | 438                         | 30                           | 19                            | 44                            | 40    | 38    | 43    |          |
| BORING MILL-NC HORIZ-VERT | 37                          | 4                            | 2                             | 8                             | 4     | 13    | 5     |          |
| CHEMICAL MACHINE          | 38                          | 1                            | 2                             | 4                             | 4     | 4     | 4     |          |
| DRILL PRESS-RADIAL        | 297                         | 23                           | 13                            | 21                            | 27    | 21    | 29    |          |
| DRILL PRESS-TURRET TYPE   | 50                          | 10                           | 2                             | 11                            | 5     | 9     | 6     |          |
| DRILL PRESS-NC            | 85                          | 2                            | 4                             | 7                             | 8     | 2     | 8     |          |
| DRILL PRESS-SENSITIVE     | 338                         | 23                           | 15                            | 15                            | 30    | 14    | 31    |          |
| ELECTRICIAN-PRODUCTION    | 33                          | 1                            | 1                             | 17                            | 4     | 3     | 5     |          |
| FITTERS BOILER            | 28                          | 5                            | 1                             | 9                             | 3     | 12    | 4     |          |
| GRINDER-SURFACE           | 116                         | 10                           | 5                             | 24                            | 12    | 31    | 14    |          |
| GRINDER-CENTERLESS EXTINT | 131                         | 8                            | 6                             | 8                             | 12    | 14    | 13    |          |
| HELPER-PRODUCTION         | 465                         | 24                           | 20                            | 33                            | 41    | 30    | 44    |          |
| LATHE-ENGINE TURRET       | 1,030                       | 72                           | 44                            | 55                            | 92    | 49    | 96    |          |
| LATHE-NC ENGINE TURRET    | 105                         | 7                            | 5                             | 9                             | 10    |       | 10    |          |
| LAYOUT MAN                | 162                         | 16                           | 7                             | 32                            | 16    | 12    | 18    |          |
| MACHINIST-ALL AROUND      | 519                         | 53                           | 23                            | 87                            | 51    | 88    | 58    |          |
| MILLING MACHINE           | 377                         | 24                           | 16                            | 36                            | 34    | 30    | 37    |          |
| MILLING MACHINE-NC        | 56                          | 9                            | 3                             | 8                             | 6     | 14    | 7     |          |
| PACKER                    | 430                         | 8                            | 18                            | 26                            | 37    | 28    | 39    |          |
| PAINTER                   | 452                         | 27                           | 19                            | 30                            | 40    | 38    | 43    |          |
| PLANER                    | 49                          |                              | 2                             |                               | 4     |       | 4     |          |
| POLISHER AND BUFFER       | 127                         | 12                           | 6                             | 16                            | 12    | 8     | 13    |          |
| PROGRAMMER-NC ALL TYPES   | 52                          | 16                           | 3                             | 21                            | 7     | 21    | 9     |          |
| PRESS PUNCH               | 528                         | 41                           | 23                            | 57                            | 49    | 40    | 53    |          |
| PRESS PUNCH NC            | 174                         | 2                            | 7                             | 7                             | 15    | 5     | 15    |          |
| PRESS HYDRAULIC           | 94                          |                              | 4                             | 2                             | 8     | 2     | 8     |          |
| SAW BAND                  | 70                          |                              | 3                             | 9                             | 6     | 4     | 7     |          |
| SAW RADIAL CUTOFF         | 38                          | 1                            | 2                             | 2                             | 3     | 2     | 4     |          |
| SCREW MACHINE AUTO        | 143                         | 24                           | 7                             | 15                            | 14    | 19    | 16    |          |
| SHEET METAL WORKER        | 152                         | 20                           | 7                             | 20                            | 15    | 16    | 16    |          |
| WELDER ARC AND GAS        | 991                         | 143                          | 45                            | 90                            | 96    | 57    | 101   |          |
| WELDER RESISTANCE         | 206                         | 23                           | 9                             | 17                            | 19    | 30    | 21    |          |
| WELDER NC                 | 40                          | 4                            | 2                             | 2                             | 4     | 4     | 4     |          |
| WELDER OTHER              | 202                         | 57                           | 10                            | 40                            | 23    | 23    | 25    |          |
| NOT ELSEWHERE CLASSIFIED  | 1,122                       | 62                           | 47                            | 56                            | 98    | 69    | 103   |          |
| TOTAL                     | 13,479                      | 1,075                        | 587                           | 1,170                         | 1,238 | 1,054 | 1,327 |          |

| .....OCCUPATION..... | TOTAL<br>PRSNLTLY<br>EMPLOYED | .....P R O J E C T E D.....  |                               |                               | COMMENTS |
|----------------------|-------------------------------|------------------------------|-------------------------------|-------------------------------|----------|
|                      |                               | 1 YEAR OUT<br>GROWTH REPLCMT | 3 YEARS OUT<br>GROWTH REPLCMT | 5 YEARS OUT<br>GROWTH REPLCMT |          |

### FORGE AND STRUCTURAL SHOP

|                           |     |    |    |    |    |    |    |
|---------------------------|-----|----|----|----|----|----|----|
| HAMMERSMITH HAMMER DRIVER | 107 | 14 | 5  | 12 | 10 | 12 | 11 |
| PRESS BRAKE               | 198 | 13 | 8  | 14 | 18 | 19 | 19 |
| SHEAR                     | 121 | 20 | 6  | 20 | 13 | 14 | 14 |
| NOT ELSEWHERE CLASSIFIED  | 163 | 17 | 7  | 23 | 16 | 2  | 16 |
| TOTAL                     | 589 | 64 | 26 | 69 | 57 | 47 | 60 |

### FOUNDRY

|                           |       |    |    |    |    |    |     |
|---------------------------|-------|----|----|----|----|----|-----|
| ANNEALER                  | 32    | 1  | 1  |    | 3  |    | 3   |
| CHIPPER                   | 176   | 26 | 8  | 16 | 17 | 12 | 18  |
| CORE BLOWER               | 6     | 1  |    | 4  | 1  | 2  | 1   |
| COREMAKER                 | 94    | 8  | 4  | 7  | 9  | 10 | 9   |
| CUPOLA TENDER             | 13    |    | 1  | 1  | 1  | 2  | 1   |
| FURNACE MALLEABLE         | 17    |    | 1  |    | 1  |    | 1   |
| GRINDER-PED SWING PORTABL | 73    | 8  | 3  | 7  | 7  | 9  | 8   |
| HEAT TREATERS             | 58    | 5  | 3  | 5  | 5  |    | 5   |
| IRON POURER               | 70    | 2  | 3  | 4  | 6  | 4  | 5   |
| MELTER-CRUCIBLE ELECTRIC  | 28    | 1  | 1  | 2  | 2  |    | 2   |
| MOLDER-BENCH FLOOR        | 53    | 2  | 2  | 6  | 5  | 3  | 5   |
| MOLDER-MACHINE SQUEEZER   | 137   | 8  | 6  | 13 | 12 | 11 | 13  |
| PATTERNMAKER-WOOD METAL   | 60    |    | 2  | 2  | 5  | 2  | 5   |
| SAND MILL                 | 19    |    | 1  | 2  | 2  | 1  | 2   |
| STRAIGHTENING PRESS       | 20    |    | 1  | 2  | 2  | 2  | 2   |
| TUMBLER OR WATER BLASTER  | 12    | 1  | 1  | 1  | 1  | 1  | 1   |
| NOT ELSEWHERE CLASSIFIED  | 236   | 5  | 10 | 6  | 20 | 6  | 20  |
| TOTAL                     | 1,104 | 68 | 48 | 78 | 99 | 65 | 102 |

| .....OCCUPATION..... | TOTAL<br>PRSVTLY<br>EMPLOYED | .....P R O J E C T E D.....  |                               |                               |                               |                               |  | COMMENTS |
|----------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--|----------|
|                      |                              | 1 YEAR OUT<br>GROWTH REPLCMT | 3 YEARS OUT<br>GROWTH REPLCMT | 5 YEARS OUT<br>GROWTH REPLCMT | 3 YEARS OUT<br>GROWTH REPLCMT | 5 YEARS OUT<br>GROWTH REPLCMT |  |          |

### PLASTICS

|                          |     |     |    |     |    |     |    |
|--------------------------|-----|-----|----|-----|----|-----|----|
| COMPRESSION MOLDER       | 71  | 21  | 4  | 13  | 8  | 13  | 9  |
| EXTRUSION MACHINE        | 26  | 23  | 2  | 3   | 4  | 3   | 4  |
| FINISHER                 | 118 | 31  | 6  | 29  | 14 | 12  | 15 |
| MOLDING-TROUBLE SHOOTER  | 24  | 4   | 1  | 4   | 3  |     | 3  |
| INJECTION MOLDER         | 345 | 50  | 16 | 45  | 34 | 50  | 38 |
| NOT ELSEWHERE CLASSIFIED | 110 | 23  | 5  | 10  | 11 | 13  | 12 |
|                          | 13  | 4   | 1  | 9   | 2  | 13  | 3  |
|                          | 13  | 4   | 1  | 9   | 2  | 13  | 3  |
| TOTAL                    | 720 | 160 | 36 | 122 | 78 | 117 | 87 |

### PRINTING AND PUBLISHING

|                           |     |    |    |    |    |    |    |
|---------------------------|-----|----|----|----|----|----|----|
| FLAT STRIPPER             | 49  |    | 2  | 9  | 4  | 9  | 5  |
| PRESSMAN & PLATE PRINTERS | 130 |    | 5  | 9  | 11 |    | 11 |
| NOT ELSEWHERE CLASSIFIED  | 273 | 27 | 12 | 52 | 27 | 17 | 30 |
| TOTAL                     | 452 | 27 | 19 | 70 | 42 | 26 | 46 |

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| .....OCCUPATION.....      | TOTAL<br>PRSVTLY<br>EMPLOYED | .....P R O J E C T E D.....  |                               |                               |     |     |          |
|---------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|-----|-----|----------|
|                           |                              | 1 YEAR OUT<br>GROWTH REPLCMT | 3 YEARS OUT<br>GROWTH REPLCMT | 5 YEARS OUT<br>GROWTH REPLCMT |     |     | COMMENTS |
| OFFICE CLERICAL TECHNICAL |                              |                              |                               |                               |     |     |          |
| ARTIST COMMERCIAL/INDUSTR | 38                           |                              | 2                             | 17                            | 4   | 9   | 5        |
| CLERK ACCOUNTING          | 562                          | 19                           | 23                            | 40                            | 49  | 35  | 52       |
| CLERK GENERAL             | 1,019                        | 24                           | 42                            | 65                            | 87  | 52  | 92       |
| CLERK PRODUCTION          | 488                          | 13                           | 20                            | 20                            | 41  | 12  | 42       |
| COMPUTER OPERATOR         | 76                           | 8                            | 3                             | 7                             | 7   | 19  | 8        |
| DRAFTING DETAILER         | 297                          | 22                           | 13                            | 32                            | 27  | 39  | 31       |
| DRAFTSMAN                 | 459                          | 46                           | 20                            | 58                            | 44  | 46  | 48       |
| DUPLICATING MACH OPERATOR | 77                           | 2                            | 3                             | 4                             | 7   | 2   | 7        |
| EXPEDITOR PRODUCTION      | 287                          | 19                           | 12                            | 23                            | 26  | 29  | 28       |
| KEY PUNCH OPERATOR        | 252                          | 10                           | 11                            | 26                            | 23  | 13  | 24       |
| PROGRAMMER COMPUTER       | 87                           | 4                            | 4                             | 7                             | 8   | 6   | 8        |
| SECRETARY                 | 621                          | 21                           | 26                            | 35                            | 54  | 29  | 56       |
| STENOGRAPHER              | 236                          | 8                            | 12                            | 15                            | 24  | 9   | 26       |
| SWITCHBOARD/RECEPTIONIST  | 338                          | 1                            | 14                            | 11                            | 28  | 6   | 29       |
| TABULATING MACHINE        | 8                            |                              |                               | 2                             | 1   | 2   | 1        |
| TYPIST                    | 102                          | 15                           | 5                             | 11                            | 10  | 23  | 12       |
| NOT ELSEWHERE CLASSIFIED  | 448                          | 14                           | 18                            | 30                            | 39  | 36  | 42       |
| TOTAL                     | 5,445                        | 226                          | 228                           | 403                           | 479 | 367 | 511      |

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TABLE 2

## MANUFACTURING SKILLED EMPLOYMENT PROJECTIONS BY STANDARD INDUSTRIAL CODES

| SIC.....TITLE.....             | BES SIC<br>EMPLOYMENT PRESENT<br>AS OF SKILLED<br>JUNE, 1975 EPLMNT |        | .....S K I L L E D   E M P L O Y M E N T ..... |                               |                               |       |       |       |
|--------------------------------|---------------------------------------------------------------------|--------|------------------------------------------------|-------------------------------|-------------------------------|-------|-------|-------|
|                                |                                                                     |        | 1 YEAR OUT<br>GROWTH REPLMT                    | 3 YEARS OUT<br>GROWTH REPLCMT | 5 YEARS OUT<br>GROWTH REPLCMT |       |       |       |
| 23 APPAREL                     | 73                                                                  | 48     |                                                | 2                             |                               | 4     |       | 4     |
| 25 FURNITURE                   | 1,177                                                               | 990    | 87                                             | 43                            | 87                            | 92    | 100   | 99    |
| 26 PAPER & PAPER PRDTS         | 1,982                                                               | 835    | 18                                             | 34                            | 12                            | 69    | 37    | 71    |
| 27 PRINTING & PUBLISHING       | 935                                                                 | 524    | 35                                             | 22                            | 87                            | 50    | 79    | 56    |
| 28 CHEMICAL & ALLIED PRDTS     | 327                                                                 | 190    | 31                                             | 9                             | 33                            | 20    | 30    | 22    |
| 30 RUBBER & PLASTICS PRDTS     | 3,454                                                               | 1,336  | 200                                            | 62                            | 207                           | 135   | 224   | 153   |
| 32 STONE, CLAY & GLASS         | 178                                                                 | 51     | 25                                             | 3                             | 5                             | 6     |       | 7     |
| 33 PRIMARY METALS              | 2,747                                                               | 1,858  | 87                                             | 78                            | 149                           | 164   | 109   | 174   |
| 34 FABRICATED METALS           | 7,701                                                               | 5,443  | 431                                            | 235                           | 644                           | 512   | 626   | 561   |
| 35 MACHINERY-NON ELECTRICAL    | 5,015                                                               | 3,885  | 431                                            | 173                           | 475                           | 375   | 344   | 408   |
| 36-37 MACH-ELECT, TRANS EQUIP  | 14,282                                                              | 9,290  | 480                                            | 398                           | 340                           | 804   | 148   | 820   |
| 38 INSTRUMENTS & RELATED PRDTS | 3,311                                                               | 2,208  | 67                                             | 91                            | 227                           | 196   | 384   | 224   |
| 39 MANUFACTURING-MISC          | 1,364                                                               | 1,152  | 17                                             | 48                            | 55                            | 98    | 29    | 101   |
| 48 COMMUNICATIONS              | 1,945                                                               | 1,186  |                                                | 47                            | 23                            | 96    | 16    | 98    |
| 49 ELECTRIC/GAS UTILITIES      | 630                                                                 | 332    | 1                                              | 13                            | 1                             | 27    |       | 27    |
| TOTAL                          | 45,121                                                              | 29,328 | 1,910                                          | 1,257                         | 2,345                         | 2,648 | 2,126 | 2,825 |

TABLE 3

PROJECTED MANUFACTURING EMPLOYMENT

|                                                                          | 1977   | 1979   | 1981   |
|--------------------------------------------------------------------------|--------|--------|--------|
| TOTAL SKILLED EMPLOYMENT . . . . .                                       | 31,238 | 33,583 | 35,709 |
| CUMULATIVE TOTAL . . . . .<br>New Jobs                                   | 1,910  | 4,255  | 6,381  |
| CUMULATIVE TOTAL . . . . .<br>Replacement Needs Due<br>to Above Turnover | 1,257  | 3,905  | 6,730  |
| GRAND TOTAL . . . . .<br>New Jobs and Replacement Needs                  | 3,167  | 8,160  | 13,111 |